Aptitude questions

presented by Sreeraj

1. A train running at the speed of 60 km/hr crosses a pole in 9 seconds. What is the length of the train?

a. 120 metres

b. 180 metres

c. 324 metres

d. 150 metres

answer is d

Explanation:

$$\text{Speed} = \left(60 \times \frac{5}{18}\right) \text{m/sec} = \left(\frac{50}{3}\right) \text{m/sec.}$$

Length of the train = (Speed x Time).

$$\therefore \text{ Length of the train} = \left(\frac{50}{3} \times 9\right) \text{m} = 150 \text{ m.}$$

2.The length of the bridge, which a train 130 metres long and travelling at 45 km/hr can cross in 30 seconds, is:

a.200 m

b.225 m

c.245 m

d.250 m

Answer is c

Distance travelled by Train= length of bridge + length of the train

So, x + 130m.

Speed = 45km/hr = 45 * 5/18 = 25/2 m/s.

Distance = speed * time.

25/2 * 30,

= 245m.

3.Father is aged three times more than his son Ronit. After 8 years, he would be two and a half times of Ronit's age. After further 8 years, how many times would he be of Ronit's age?

(A) 2 times

(B) $2\frac{1}{2}$ times

(C) $2\frac{3}{4}$ times

(D) 3 times

Answer: Option Ⓐ

Explanation:

Let Ronit's present age be x years. Then, father's present age $=(x + 3x)$ years $= 4x$ years.

$$\therefore \quad (4x + 8) = \frac{5}{2}(x + 8)$$

$$\Rightarrow 8x + 16 = 5x + 40$$

$$\Rightarrow 3x = 24$$

$$\Rightarrow x = 8.$$

Hence, required ratio $= \dfrac{(4x + 16)}{(x + 16)} = \dfrac{48}{24} = 2.$

4.The sum of ages of 5 children born at the intervals of 3 years each is 50 years. What is the age of the youngest child?

(A) 4 years

(B) 8 years

(C) 10 years

(D) None of these

Answer: Option (A)

Explanation:

Let the ages of children be x , $(x + 3)$, $(x + 6)$, $(x + 9)$ and $(x + 12)$ years.

Then, $x + (x + 3) + (x + 6) + (x + 9) + (x + 12) = 50$

$\Rightarrow 5x = 20$

$\Rightarrow x = 4$.

$\therefore$ Age of the youngest child = x = 4 years.

5.A is two years older than B who is twice as old as C. If the total of the ages of A, B and C be 27, then how old is B?

(A) 7

(B) 8

(C) 9

(D) 10

(E) 11

Answer: Option ⓓ

Explanation:

Let C's age be x years. Then, B's age = $2x$ years. A's age = $(2x + 2)$ years.

$\therefore (2x + 2) + 2x + x = 27$

$\Rightarrow 5x = 25$

$\Rightarrow x = 5.$

Hence, B's age = $2x$ = 10 years.

6.Present ages of Sameer and Anand are in the ratio of 5 : 4 respectively. Three years hence, the ratio of their ages will become 11 : 9 respectively. What is Anand's present age in years?

(A) 24

(B) 27

(C) 40

(D) Cannot be determined

(E) None of these

Answer: Option Ⓐ

Explanation:

Let the present ages of Sameer and Anand be $5x$ years and $4x$ years respectively.

Then, $\frac{5x + 3}{4x + 3} = \frac{11}{9}$

$\Rightarrow 9(5x + 3) = 11(4x + 3)$

$\Rightarrow 45x + 27 = 44x + 33$

$\Rightarrow 45x - 44x = 33 - 27$

$\Rightarrow x = 6.$

$\therefore$ Anand's present age $= 4x = 24$ years.

7.A can do a work in 15 days and B in 20 days. If they work on it together for 4 days, then the fraction of the work that is left is :

(A) $\frac{1}{4}$

(B) $\frac{1}{10}$

(C) $\frac{7}{15}$

(D) $\frac{8}{15}$

Answer: Option (D)

Explanation:

A's 1 day's work = $\frac{1}{15}$;

B's 1 day's work = $\frac{1}{20}$;

(A + B)'s 1 day's work = $\left(\frac{1}{15} + \frac{1}{20}\right) = \frac{7}{60}$.

(A + B)'s 4 day's work = $\left(\frac{7}{60} \times 4\right) = \frac{7}{15}$.

Therefore, Remaining work = $\left(1 - \frac{7}{15}\right) = \frac{8}{15}$.

8.Three pipes A, B and C can fill a tank from empty to full in 30 minutes, 20 minutes, and 10 minutes respectively. When the tank is empty, all the three pipes are opened. A, B and C discharge chemical solutions P,Q and R respectively. What is the proportion of the solution R in the liquid in the tank after 3 minutes?

(A) $\frac{5}{11}$

(B) $\frac{6}{11}$

(C) $\frac{7}{11}$

(D) $\frac{8}{11}$

Answer: Option Ⓑ

Explanation:

Part filled by (A + B + C) in 3 minutes = $3\left(\frac{1}{30}+\frac{1}{20}+\frac{1}{10}\right)=\left(3 \times \frac{11}{60}\right)=\frac{11}{20}$.

Part filled by C in 3 minutes = $\frac{3}{10}$.

$\therefore$ Required ratio = $\left(\frac{3}{10} \times \frac{20}{11}\right)=\frac{6}{11}$.

9.Look at this series: 2, 1, (1/2), (1/4), ... What number should come next?

Ⓐ (1/3)

Ⓑ (1/8)

Ⓒ (2/8)

Ⓓ (1/16)

Answer: Option Ⓑ

Explanation:

This is a simple division series; each number is one-half of the previous number.

In other terms to say, the number is divided by 2 successively to get the next result.

```
4/2 = 2 2/2 = 1 1/2 = 1/2 (1/2)/2 = 1/4 (1/4)/2 = 1/8 and so on.
```

10.Look at this series: 7, 10, 8, 11, 9, 12, … What number should come next?

Ⓐ 7

Ⓑ 10

Ⓒ 12

Ⓓ 13

Answer: Option Ⓑ

Explanation:

This is a simple alternating addition and subtraction series. In the first pattern, 3 is added; in the second, 2 is subtracted.

11.Look at this series: 36, 34, 30, 28, 24, ... What number should come next?

Ⓐ 20

Ⓑ 22

Ⓒ 23

Ⓓ 26

Answer: Option Ⓑ

Explanation:

This is an alternating number subtraction series. First, 2 is subtracted, then 4, then 2, and so on.

12. SCD, TEF, UGH, ____, WKL

Ⓐ CMN

Ⓑ UJI

Ⓒ VIJ

Ⓓ IJT

Answer: Option ©

Explanation:

There are two alphabetical series here. The first series is with the first letters only: STUVW. The second series involves the remaining letters: CD, EF, GH, IJ, KL.

13.FAG, GAF, HAI, IAH, ____

Ⓐ JAK

Ⓑ HAL

Ⓒ HAK

Ⓓ JAI

Answer: Option Ⓐ

Explanation:

The middle letters are static, so concentrate on the first and third letters. The series involves an alphabetical order with a reversal of the letters. The first letters are in alphabetical order: F, G, H, I , J. The second and fourth segments are reversals of the first and third segments. The missing segment begins with a new letter.

14.ELFA, GLHA, ILJA, _____, MLNA

(A) OLPA

(B) KLMA

(C) LLMA

(D) KLLA

Answer: Option Ⓓ

Explanation:

The second and forth letters in the series, L and A, are static. The first and third letters consist of an alphabetical order beginning with the letter E.

15.CMM, EOO, GQQ, _____, KUU

Ⓐ GRR

Ⓑ GSS

Ⓒ ISS

Ⓓ ITT

Answer: Option ©

Explanation:

The first letters are in alphabetical order with a letter skipped in between each segment: C, E, G, I, K. The second and third letters are repeated; they are also in order with a skipped letter: M, O, Q, S, U.

16.ZA5, Y4B, XC6, W3D, _____

Ⓐ E_7V

Ⓑ V_2E

Ⓒ VE_5

Ⓓ VE_7

Answer: Option Ⓓ

Explanation:

There are three series to look for here. The first letters are alphabetical in reverse: Z, Y, X, W, V. The second letters are in alphabetical order, beginning with A. The number series is as follows: 5, 4, 6, 3, 7.

17.QPO, NML, KJI, ____, EDC

Ⓐ HGF

Ⓑ CAB

Ⓒ JKL

Ⓓ GHI

Answer: Option Ⓐ

Explanation:

This series consists of letters in a reverse alphabetical order.

Read each sentence to find out whether there is any grammatical error in it. The error, if any will be in one part of the sentence. The letter of that part is the answer. If there is no error, the answer is 'D'. (Ignore the errors of punctuation, if any).

18.(solve as per the direction given above)

Ⓐ We discussed about the problem so thoroughly

Ⓑ on the eve of the examination

Ⓒ that I found it very easy to work it out

Ⓓ No error.

Answer: Option Ⓐ

Explanation:

We discussed the problem so thoroughly

19.(solve as per the direction given above)

Ⓐ An Indian ship

Ⓑ laden with merchandise

Ⓒ got drowned in the Pacific Ocean.

Ⓓ No error.

Answer: Option ©

Explanation:

sank in the Pacific Ocean

20.(solve as per the direction given above)

Ⓐ If I had known

Ⓑ this yesterday

Ⓒ I will have helped him.

Ⓓ No error.

Answer: Option ©

Explanation:

I would have helped him

21.(solve as per the direction given above)

Ⓐ I have got

Ⓑ my M.Sc. degree

Ⓒ in 1988.

Ⓓ No error.

Answer: Option Ⓐ

Explanation:

I got

22.(solve as per the direction given above)

Ⓐ Do the roses in your garden smell

Ⓑ more sweetly

Ⓒ than those in ours?

Ⓓ No error.

Answer: Option Ⓑ

Explanation:

sweeter

23.(solve as per the direction given above)

Ⓐ A small baby breathes about

Ⓑ 45 times per minute while

Ⓒ a child of about six years breathes about 25 times per minute.

Ⓓ No error.

Answer: Option (D)

24.Pointing to a photograph of a boy Suresh said, "He is the son of the only son of my mother." How is Suresh related to that boy?

(A) Brother

(B) Uncle

(C) Cousin

(D) Father

Answer: Option ⓓ

Explanation:

The boy in the photograph is the only son of the son of Suresh's mother i.e., the son of Suresh. Hence, Suresh is the father of boy.

25.Pointing to a photograph. Bajpai said, "He is the son of the only daughter of the father of my brother." How Bajpai is related to the man in the photograph?

(A) Nephew

(B) Brother

(C) Father

(D) Maternal Uncle

Answer: Option ⓓ

Explanation:

The man in the photo is the son of the sister of Bajpai. Hence, Bajpai is the maternal uncle of the man in the photograph.

26.Deepak said to Nitin, "That boy playing with the football is the younger of the two brothers of the daughter of my father's wife." How is the boy playing football related to Deepak?

(A) Son

(B) Brother

(C) Cousin

(D) Brother-in-law

Answer: Option (B)

Explanation:

Father's wife → mother. Hence, the daughter of the mother means sister and sister's younger brother means brother. Therefore, the boy is the brother of Deepak.

27:: 589654237, 89654237, 8965423, 965423, ?

Ⓐ 58965

Ⓑ 65423

Ⓒ 89654

Ⓓ 96542

Answer: Option ⓓ

Explanation:

The digits are removed one by one from the beginning and the end in order alternately

so as to obtain the subsequent terms of the series.

28 : 3, 10, 101,?

Ⓐ 10101

Ⓑ 10201

Ⓒ 10202

Ⓓ 11012

Answer: Option ©

Explanation:

Each term in the series is obtained by adding 1 to the square of the preceding term.

So, missing term = $(101)^2 + 1 = 10202$.

29 : 125,80,45,20,?

Ⓐ 5

Ⓑ 8

Ⓒ 10

Ⓓ 12

Answer: Option Ⓐ

Explanation:

The pattern is - 45, - 35, - 25, ...

So, missing term = 20 - 15 = 5.

30 : 10, 100, 200, 310, ?

Ⓐ 400

Ⓑ 410

Ⓒ 420

Ⓓ 430

Answer: Option ⓓ

Explanation:

The pattern is + 90 + 100, + 110,.....

So, missing term = 310 + 120 = 430.